

Fluorescent Lamp Ballasts: 2001

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Summary

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These data are also available on Internet through the U.S. Department of Commerce and STAT-USA by subscription. The Internet address is: www.stat-usa.gov/. Follow the prompts to register. Also, you may call 202-482-1986 or 1-800-STAT-USA, for further information.

SUMMARY OF FINDINGS. The value of manufacturers' shipments of fluorescent lamp ballasts amounted to \$875 million in 2001, a decrease of 2.6 percent from shipments of \$898 million in 2000. The quantity of

fluorescent lamp ballasts shipped decreased to 99.2 million units in 2001, from 104.7 million units in 2000, a 5.3 percent decrease.

Magnetic type's share of the market fell to 47 percent of the quantity, and only 34 percent of the value of shipments. Electronic type's market share increased to 53 percent of the quantity and 66 percent of the value of shipments.

The value of shipments of electronic ballasts totaled \$580 million in 2001, compared to a level of \$556 million in 2000. Quantity of ballasts reached 52.5 million units, the first year that quantity of electronic type sold surpassed the level of magnetic sales quantity. Electronic ballast unit value decreased for the eleventh consecutive year.

For general CIR information, explanation of general terms and historical note, see the appendix.

Address inquiries concerning these data to Investment Goods Industries Branch, Manufacturing and Construction Division (MCD), Washington, DC 20233-6900, or call Chris Blackburn, 301-763-5167.

For mail or fax copies of this publication, please contact the Information Services Center, MCD, Washington, DC 20233-6900, or call 301-457-4673.

U S C E N S U S B U R E A U

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Table 1. Summary of Shipments of Fluorescent Lamp Ballasts: 1991 to 2001
[Quantity in thousands of ballasts. Value in thousands of dollars]

Year	Magnetic type							
	Total		Uncorrected power-factor type		Corrected power-factor type		Electronic type	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
2001.....	99,250	875,311	(D)	(D)	(D)	(D)	52,548	580,315
2000.....	104,771	898,524	17,908	58,719	37,540	284,289	49,323	555,516
1999.....	102,894	884,513	19,822	58,145	41,441	326,314	41,631	500,054
1998.....	103,724	914,265	21,298	62,207	42,584	339,230	39,842	512,828
1997.....	103,947	906,477	24,517	68,528	42,887	343,928	36,543	494,021
1996.....	97,355	909,178	24,172	67,884	42,841	389,877	30,342	451,417
1995.....	105,306	1,002,115	24,764	68,165	47,648	427,062	32,894	506,888
1994.....	108,114	940,746	27,517	75,013	55,991	474,958	24,606	390,775
1993.....	107,428	969,542	28,150	65,820	54,790	457,222	24,488	446,500
1992.....	97,034	812,287	28,363	68,771	55,379	468,940	13,292	274,576
1991.....	88,729	718,317	24,919	61,413	55,467	476,867	8,343	180,037

D Withheld to avoid disclosing data for individual companies.

Table 2. Shipments of Fluorescent Lamp Ballasts by Product: 2001
[Quantity in thousands of ballasts. Value in thousands of dollars]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
2001											
33531115	Fluorescent lamp ballasts.....	99,250	875,311	26,625	230,631	25,247	222,458	24,353	215,115	23,025	207,107
	Magnetic type.....	46,701	294,996	13,749	87,338	11,459	71,125	10,698	66,147	10,795	70,386
	Uncorrected power-factor type (less than 85 percent power factor).....	(D)	(D)	4,027	14,152	(D)	(D)	(D)	(D)	(D)	(D)
	Preheat start.....	(D)	(D)	2,371	5,672	(D)	(D)	(D)	(D)	(D)	(D)
3353115103	Single-ended compact lamps 1/.....	(D)	(D)	(D)	(D)	579	1,298	581	1,271	548	1,234
3353115105	Linear and circline lamps up to 20 watt.....	4,772	10,977	1,388	3,104	1,181	2,715	1,174	2,691	1,028	2,467
3353115107	Linear and circline lamps 21 watts and over 1/.....	(D)	(D)	983	2,568	(D)	(D)	(D)	(D)	(D)	(D)
3353115109	All other magnetic uncorrected power- factor type, including rapid start.....	6,444	34,438	1,656	8,480	1,580	8,577	1,628	8,778	1,580	8,603
	Corrected power-factor type (85 percent power factor or above).....	(D)	(D)	9,722	73,186	(D)	(D)	(D)	(D)	(D)	(D)
	Slimline and instant start.....	(D)	(D)	1,654	17,388	(D)	(D)	(D)	(D)	(D)	(D)
3353115111	Two-lamp 75W/96T12/IS and 57W/72T12/IS.....	(D)	(D)	1,553	16,162	(D)	(D)	(D)	(D)	(D)	(D)
3353115113	Other slimline and instant start.....	(D)	(D)	101	1,226	(D)	(D)	(D)	(D)	(D)	(D)
	Rapid start.....	(D)	(D)	7,755	53,388	(D)	(D)	(D)	(D)	(D)	(D)
3353115115	One-lamp 40W/48T12/RS 2/.....	(D)	(D)	(D)	(D)	251	1,325	217	1,183	218	1,200
3353115117	Two-lamp 40W/48T12/RS.....	(D)	(D)	6,316	33,422	(D)	(D)	(D)	(D)	(D)	(D)
3353115119	Two-lamp 32W/48T8/RS 2/.....	597	4,153	383	2,400	89	756	66	529	59	468
	All other rapid start 3/.....	(D)	(D)	1,056	17,566	(D)	(D)	(D)	(D)	(D)	(D)
3353115121	800 to 1000 mA 3/.....	(D)	(D)	776	13,859	(D)	(D)	(D)	(D)	(D)	(D)
3353115123	1500 mA 3/.....	(D)	(D)	39	1,396	(D)	(D)	(D)	(D)	(D)	(D)
3353115125	Other rapid start 3/.....	(D)	(D)	241	2,311	(D)	(D)	(D)	(D)	(D)	(D)
	Preheat start 3/4/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115127	Single-ended compact lamps 3/4/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115129	Linear and circline lamps 3/4/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115131	All other magnetic corrected power-factor type 3/4/.....	3,403	47,644	313	2,410	r/1,100	15,312	919	13,614	1,071	16,308
	Electronic type.....	52,548	580,315	12,876	143,293	13,788	151,333	13,655	148,968	12,230	136,721
	Uncorrected power-factor type (less than 90 percent power factor).....	142	2,088	r/44	r/603	r/36	r/526	31	531	31	428
3353115133	Single-ended compact lamps.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115135	All other electronic uncorrected power-factor type.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corrected power-factor type (90 percent power factor or above).....	52,406	578,227	12,832	142,690	13,752	150,807	13,624	148,437	12,199	136,293
	Instant start:										
	One- and two-lamp 32W/48T8.....	24,135	225,741	5,731	54,070	6,467	60,399	6,447	60,117	5,490	51,155
3353115139	Three- and four-lamp 32W/48T8.....	18,063	197,918	4,408	48,622	4,629	49,586	4,775	52,400	4,251	47,310
3353115141	Two-lamp 59W/96T8.....	1,547	22,826	409	5,912	425	6,199	319	4,765	395	5,950
3353115143	Two-lamp 75W/96T12/IS 5/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115145	All other instant start 5/.....	1,160	15,915	319	4,385	299	4,059	266	3,567	276	3,904
	Rapid start:										
3353115147	All 32W/48T8.....	2,503	37,310	669	9,497	649	9,384	594	9,000	590	9,429
3353115149	All other T8, 4 foot and less 6/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115151	Two-lamp 40W/48T12/RS.....	426	5,812	123	1,674	91	1,247	112	1,525	101	1,366
3353115153	800 mA 6/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115155	All other rapid start 6/.....	4,178	62,912	1,093	16,658	1,036	16,257	1,037	15,162	1,012	14,835
3353115157	All other electronic corrected power-factor type.....	394	9,793	80	1,872	156	3,676	74	1,901	84	2,344

D Withheld to avoid disclosing data for individual companies. mA Milliampere. r/Revised by 5 percent or more from previously published data.

1/For first quarter, product code 3353115103 is combined with product code 3353115107 to avoid disclosing data for individual companies.

2/For first quarter, product code 3353115115 is combined with product code 3353115119 to avoid disclosing data for individual companies.

3/For second through fourth quarters, "All other rapid start" and product codes 3353115121, 3353115123, 3353115125, and "Preheat start" and product codes 3353115127 and 3353115129 are combined with product code 3353115131 to avoid disclosing data for individual companies.

4/For first quarter, "preheat start" and product codes 3353115127 and 3353115129 are combined with product code 3353115131 to avoid disclosing data for individual companies.

5/Product code 3353115143 is combined with product code 3353115145 to avoid disclosing data for individual companies.

6/Product codes 3353115149 and 3353115153 are combined with product code 3353115155 to avoid disclosing data for individual companies.

Table 3. Shipments of Fluorescent Lamp Ballasts by Product: 2000
[Quantity in thousands of ballasts. Value in thousands of dollars]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
2000											
3353115	Fluorescent lamp ballasts.....	104,771	898,524	26,461	216,784	26,658	224,120	26,275	235,322	25,377	222,298
	Magnetic type.....	55,448	343,008	15,728	96,214	14,571	88,449	12,409	77,072	12,740	81,273
	Uncorrected power-factor type (less than 85 percent power factor).....	17,908	58,719	5,138	15,275	4,656	15,279	3,963	13,805	4,151	14,360
	Preheat start.....	10,990	24,871	3,291	7,333	2,907	6,560	2,389	5,519	2,403	5,459
3353115103	Single-ended compact lamps 1/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115105	Linear and circline lamps up to 20 watt.....	6,044	12,599	1,768	3,642	1,574	3,288	1,340	2,852	1,362	2,817
3353115107	Linear and circline lamps 21 watts and over 1/.....	4,946	12,272	1,523	3,691	1,333	3,272	1,049	2,667	1,041	2,642
3353115109	All other magnetic uncorrected power- factor type, including rapid start.....	6,918	33,848	1,847	7,942	1,749	8,719	1,574	8,286	1,748	8,901
	Corrected power-factor type (85 percent power factor or above).....	37,540	284,289	10,590	80,939	9,915	73,170	8,446	63,267	8,589	66,913
	Slimline and instant start.....	6,427	67,566	1,924	19,897	1,725	17,476	1,297	14,209	1,481	15,984
3353115111	Two-lamp 75W/96T12/IS and 57W/72T12/IS.....	5,828	61,393	1,727	18,040	1,546	15,809	1,183	12,893	1,372	14,651
3353115113	Other slimline and instant start.....	599	6,173	197	1,857	179	1,667	114	1,316	109	1,333
	Rapid start.....	29,746	206,574	8,336	58,505	7,766	52,507	6,843	46,851	6,801	48,711
3353115115	One-lamp 40W/48T12/RS 2/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115117	Two-lamp 40W/48T12/RS.....	24,017	131,125	6,571	35,462	6,283	33,690	5,645	31,456	5,518	30,517
3353115119	Two-lamp 32W/48T8/RS 2/.....	1,578	10,165	449	2,924	410	2,526	391	2,578	328	2,137
	All other rapid start	4,151	65,284	1,316	20,119	1,073	16,291	807	12,817	955	16,057
3353115121	800 to 1000 mA	2,711	48,777	850	15307	668	12,089	527	9,101	666	12,280
3353115123	1500 mA	148	5,544	45	1,615	35	1,315	32	1,246	36	1,368
3353115125	Other rapid start	1,292	10,963	421	3197	370	2,887	248	2,470	253	2,409
	Preheat start 3/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115127	Single-ended compact lamps 3/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115129	Linear and circline lamps 3/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115131	All other magnetic corrected power-factor type 3/.....	1,367	10,149	330	2,537	424	3,187	306	2,207	307	2,218
	Electronic type.....	49,323	555,516	10,733	120,570	12,087	135,671	13,866	158,250	12,637	141,025
	Uncorrected power-factor type (less than 90 percent power factor).....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115133	Single-ended compact lamps.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115135	All other electronic uncorrected power-factor type.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Corrected power-factor type (90 percent power factor or above).....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Instant start:										
3353115137	One- and two-lamp 32W/48T8.....	21,007	203,875	4,483	43,784	5,046	48,230	5,959	58,554	5,519	53,307
3353115139	Three- and four-lamp 32W/48T8.....	16,330	183,370	3,496	39,666	3,803	42,660	4,752	53,575	4,279	47,469
3353115141	Two-lamp 59W/96T8.....	1,177	18,256	223	3,539	270	4,240	323	5,024	361	5,453
3353115143	Two-lamp 75W/96T12/IS 4/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115145	All other instant start 4/.....	1,187	16,274	272	3,730	291	4,014	321	4,475	303	4,055
	Rapid start:										
3353115147	All 32W/48T8.....	3,615	57,054	773	11,589	1,151	17,698	914	15,366	777	12,401
3353115149	All other T8, 4 foot and less	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115151	Two-lamp 40W/48T12/RS.....	474	6,958	127	1,896	124	1,826	130	1,874	93	1,362
3353115153	800 mA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
3353115155	All other rapid start	3,461	45,104	883	11,301	840	10,704	955	12,571	783	10,528
3353115157	All other electronic corrected power-factor type.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

D Withheld to avoid disclosing data for individual companies. mA Miliampere.

1/Product code 3353115103 is combined with product code 3353115107 to avoid disclosing data for individual companies.

2/Product code 3353115115 is combined with product code 3353115119 to avoid disclosing data for individual companies.

3/"Preheat start" and product codes 3353115127 and 3353115129 are combined with product code 3353115131 to avoid disclosing data for individual companies.

4/Product code 3353115143 is combined with product code 3353115145 to avoid disclosing data for individual companies.

Table 4. Shipments of Fluorescent Lamp Ballasts by Distribution Channel: 2001 and 2000
[Quantity in thousands of ballasts. Value in thousands of dollars]

Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
2001										
Fluorescent lamp ballasts.....	99,250	875,311	26,625	230,631	25,247	222,458	24,353	215,115	23,025	207,107
Shipments to original equipment manufacturers (OEM).....	73,370	585,434	19,975	155,503	18,833	151,018	17,955	144,724	16,607	134,189
Shipments to distribution.....	25,880	289,877	6,650	75,128	6,414	71,440	6,398	70,391	6,418	72,918
Magnetic type.....	46,701	294,996	13,749	87,338	11,459	71,125	10,698	66,147	10,795	70,386
Shipments to original equipment manufacturers (OEM).....	35,852	185,545	10,554	54,671	8,947	45,960	8,123	41,223	8,228	43,691
Shipments to distribution.....	10,849	109,451	3,195	32,667	2,512	25,165	2,575	24,924	2,567	26,695
Magnetic uncorrected power-factor type.....	(D)	(D)	4,027	14,152	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to original equipment manufacturers (OEM).....	(D)	(D)	3,621	11,561	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to distribution.....	(D)	(D)	406	2,591	(D)	(D)	(D)	(D)	(D)	(D)
Magnetic corrected power-factor type.....	(D)	(D)	9,722	73,186	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to original equipment manufacturers (OEM).....	(D)	(D)	6,933	43,110	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to distribution.....	(D)	(D)	2,789	30,076	(D)	(D)	(D)	(D)	(D)	(D)
Electronic type.....	52,549	580,315	12,876	143,293	13,788	151,333	13,655	148,968	12,230	136,721
Shipments to original equipment manufacturers (OEM).....	37,518	399,889	9,421	100,832	9,886	105,058	9,832	103,501	8,379	90,498
Shipments to distribution.....	15,031	180,426	3,455	42,461	3,902	46,275	3,823	45,467	3,851	46,223
Electronic uncorrected power-factor type.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to original equipment manufacturers (OEM).....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to distribution.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Electronic corrected power-factor type.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to original equipment manufacturers (OEM).....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to distribution.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2000										
Fluorescent lamp ballasts.....	104,771	898,524	26,461	216,784	26,658	224,120	26,275	235,322	25,377	222,298
Shipments to original equipment manufacturers (OEM).....	78,356	594,269	20,067	142,095	20,405	153,280	19,438	155,949	18,446	142,945
Shipments to distribution.....	26,415	304,255	6,394	74,689	6,253	70,840	6,837	79,373	6,931	79,353
Magnetic type.....	55,448	343,008	15,728	96,214	14,571	88,449	12,409	77,072	12,740	81,273
Shipments to original equipment manufacturers (OEM).....	42,625	213,053	12,327	60,940	11,430	57,107	9,418	47,187	9,450	47,819
Shipments to distribution.....	12,823	129,955	3,401	35,274	3,141	31,342	2,991	29,885	3,290	33,454
Magnetic uncorrected power-factor type.....	17,908	58,719	5,138	15,275	4,656	15,279	3,963	13,805	4,151	14,360
Shipments to original equipment manufacturers (OEM).....	16,227	49,788	4,686	13,099	4,245	13,002	3,570	11,721	3,726	11,966
Shipments to distribution.....	1,681	8,931	452	2,176	411	2,277	393	2,084	425	2,394
Magnetic corrected power-factor type.....	37,540	284,289	10,590	80,939	9,915	73,170	8,446	63,267	8,589	66,913
Shipments to original equipment manufacturers (OEM).....	26,398	163,265	7,641	47,841	7,185	44,105	5,848	35,466	5,724	35,853
Shipments to distribution.....	11,142	121,024	2,949	33,098	2,730	29,065	2,598	27,801	2,865	31,060
Electronic type.....	49,323	555,516	10,733	120,570	12,087	135,671	13,866	158,250	12,637	141,025
Shipments to original equipment manufacturers (OEM).....	35,731	381,216	7,740	81,155	8,975	96,173	10,020	108,762	8,996	95,126
Shipments to distribution.....	13,592	174,300	2,993	39,415	3,112	39,498	3,846	49,488	3,641	45,899
Electronic uncorrected power-factor type.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to original equipment manufacturers (OEM).....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to distribution.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Electronic corrected power-factor type.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to original equipment manufacturers (OEM).....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Shipments to distribution.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

D Withheld to avoid disclosing data for individual companies.

Table 5. Shipments, Exports, Imports, and Apparent Consumption of Fluorescent Lamp Ballasts: 1991 to 2000
[Quantity in thousands of ballasts. Value in thousands of dollars]

Product description			Manufacturers' shipments		Export of domestic merchandise 1/		Imports for consumption 3/	
			Quantity	Value f.o.b. plant	Quantity 2/	Value at port 2/	Quantity 2/	Value 2/4/
3353115	Fluorescent Lamp Ballasts.....	2001.....	99,250	875,311	23,540	185,934	101,777	608,955
		2000.....	104,771	898,524	20,531	164,223	125,698	634,799
		1999.....	102,894	884,513	17,277	157,642	102,454	617,711
		1998.....	103,724	914,265	14,265	138,415	95,495	601,293
		1997.....	103,947	906,477	22,982	128,119	98,010	588,552
		1996.....	97,355	909,178	17,955	92,191	81,844	504,702
		1995.....	105,306	1,002,115	10,400	72,610	73,707	502,564
		1994.....	108,114	940,746	10,178	66,697	62,702	352,952
		1993.....	107,428	969,542	8,117	64,007	62,705	385,130
		1992.....	97,034	812,287	10,382	64,789	52,977	277,672
	1991.....	88,729	718,317	6,142	38,778	35,808	152,194	

1/Source: Census Bureau report EM 545, U.S. Exports. Schedule B export number is 8504.10.0000.

2/Exports/imports are overstated due to the inclusion of specialty transformers classified in product class 3353113.

3/Source: Census Bureau report IM 145, U.S. Imports for Consumption. HTSUSA import number is 8504.10.0000.

4/This value represents c.i.f. plus U.S. import duties.

Appendix.

General CIR Survey Information, Explanation of General Terms and Historical Note

GENERAL

The CIR program has been providing monthly, quarterly, and annual measures of industrial activity for many years. Since 1904, with its cotton and fats and oils surveys, the CIR program has formed an essential part of an integrated statistical system involving the quinquennial economic census, manufacturing sector, and the annual survey of manufactures. The CIR surveys, however, provide current statistics at a more detailed product level than either of the other two statistical programs.

The primary objective of the CIR program is to produce timely, accurate data on production and shipments of selected products. The data are used to satisfy economic policy needs and for market analysis, forecasting, and decision making in the private sector. The product-level data generated by these surveys are used extensively by individual firms, trade associations, and market analysts in planning or recommending marketing and legislative strategies, particularly if their industry is significantly affected by foreign trade. Although production and shipments information are the two most common data items collected, the CIR program collects other measures also such as inventories, orders, and consumption. These surveys measure manufacturing activity in important commodity areas such as textiles and apparel, chemicals, primary metals, computer and electronic components, industrial equipment, aerospace equipment, and consumer goods.

The CIR program uses a unified data collection, processing, and publication system. The U.S. Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the economic census, manufacturing sector. The manufacturing sector provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is too large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. The CIR program includes a group of mandatory and voluntary surveys. Typically the monthly and quarterly surveys are conducted on a voluntary basis. Those companies that choose not to respond to the voluntary surveys are required to submit a mandatory annual counterpart corresponding to the more frequent survey.

NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS), 1997

The adoption of the North American Industry Classification System (NAICS) in the 1997 Economic Census has had a major impact on the comparability of current and historic data. Approximately half of the industries in the manufacturing sector of NAICS do not have comparable industries in the Standard Industrial Classification (SIC) system that was used in the past.

While most of the change affecting the manufacturing sector was change within the sector, some industries left manufacturing and others came into manufacturing. Prominent among those that left manufacturing are logging and portions of publishing. Prominent among the industries that came into the manufacturing sector are bakeries, candy stores where candy is made on the premises, custom tailors, makers of custom draperies, and tire retreading. The net effect of the classification changes are such that if the 1997 value of shipments data for all manufacturers were tabulated on an SIC basis, it would be approximately 3 percent higher.

Listed below are the NAICS sectors:

- 21 Mining
- 22 Utilities
- 23 Construction
- 31-33 Manufacturing
- 42 Wholesale Trade
- 44-45 Retail Trade
- 48-49 Transportation and Warehousing
- 51 Information
- 52 Finance and Insurance
- 53 Real Estate and Rental and Leasing
- 54 Professional, Scientific, and Technical Services
- 55 Management of Companies and Enterprises
- 56 Administrative and Support and Waste Management and Remediation Services
- 61 Educational Services
- 62 Health Care and Social Assistance
- 71 Arts, Entertainment, and Recreation
- 72 Accommodation and Food Services
- 81 Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

FUNDING

The Census Bureau funds most of the surveys. However, a number of surveys are paid for either fully or partially by other Federal Government agencies or private trade associations. A few surveys are mandated, but all are authorized by Title 13 of the United States Code.

RELIABILITY OF DATA

Survey error may result from several sources including the inability to obtain information about all cases in the survey, response errors, definitional difficulties, differences in the interpretation of questions, mistakes in recording or coding the reported data, and other errors of collection, response, coverage, and estimation. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to these nonsampling errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

A major source of bias in the published estimates is the imputing of data for nonrespondents, for late reporters, and for data that fail logic edits. Missing figures are imputed based on period-to-period movements shown by reporting firms. A figure is considered to be an impute if the value was not directly reported on the questionnaire, directly derived from other reported items, directly available from supplemental sources, or obtained from the respondent during the analytical review phase. Imputation generally is limited to a maximum of 10 percent for any one data cell. Figures with imputation rates greater than 10 percent are suppressed or footnoted. The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse, because the actual yearly movements for nonrespondents may or may not closely agree with the imputed movements. The range of difference between the actual and imputed figures is assumed to be small. The degree of uncertainty regarding the accuracy of the published data increases as the percentage of imputation increases. Figures with imputation rates above 10 percent should be used with caution.

DATA REVISIONS

Statistics for previous years may be revised as the result of corrected figures from respondents, late reports for which imputations were originally made, or other corrections. Data that have been revised by more than 5 percent from previously published data are indicated by footnotes.

DISCLOSURE

The Census Bureau collects the CIR data under the authority of Title 13, United States Code, which specifies that the information can only be used for statistical purposes and cannot be published or released in any manner that would identify a person, household, or establishment. "D" indicates that data in the cell have been suppressed to avoid disclosure of information pertaining to individual companies.

EXPLANATION OF GENERAL TERMS

Capacity. The maximum quantity of a product that can be produced in a plant in 1 day if operating for 24 hours. Includes the capacity of idle plants until the plant is reported to be destroyed, dismantled, or abandoned.

Consumption. Materials used in producing or processing a product or otherwise removing the product from the inventory.

Exports. Includes all types of products shipped to foreign countries, or to agents or exporters for reshipment to foreign countries.

Gross shipments. The quantity or value of physical shipments from domestic establishments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale or use. Shipments of products purchased for resale are omitted. Shipments of products made under toll arrangements are included.

Interplant transfers. Shipments to other domestic plants within a company for further assembly, fabrication, or manufacture.

Inventories. The quantity or value of finished goods, work in progress, and materials on hand.

Machinery in place. The number of machines of a particular type in place as of a particular date whether the machinery was used for production, prototype, or sampling, or was idle. Machinery in place includes all machinery set up in operating positions.

Net receipts. Derived by subtracting the materials held at the end of the previous month from the sum of materials used during the current month.

Production. The total volume of products produced, including: products sold; products transferred or added to inventory after adjustments for breakage, shrinkage, and obsolescence, plus any other inventory adjustment; and products that undergo further manufacture at the same establishment.

Quantities produced and consumed. Quantities of each type of product produced by a company for internal consumption within that same company.

Quantity and value of new orders. The sales value of orders received during the current reporting period for products and services to be delivered immediately or at some future date. Also represents the net sales value of contract change documents that increase or decrease the sales value of the orders to which they are related, when the parties concerned are in substantial agreement as to the amount involved. Included as orders are only those that are supported by binding legal documents such as signed contracts or letter contracts.

Quantity and value of shipments. The figures on quantity and value of shipments represent physical shipments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and

returns. Shipments to a company's own branches are assigned the same value as comparable appropriate allocation of company overhead and profit. Products bought and resold without further manufacture are excluded.

Stocks. Total quantity of ending finished inventory.

Unfilled orders (backlog). Calculated by adding net new orders and subtracting net sales from the backlog at the end of the preceding year.

HISTORICAL NOTE

Data on fluorescent lamp ballasts have been collected by the Census Bureau since 1955. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library.